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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/823.603

04/14/2004

Dong-Ryong Kim

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EXAMINER

TRINH, TAN H

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

01/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/823,603

Applicant(s)

KIM, DONG-RYONG

Examiner

TAN TRINH

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 12-07-2007, the information disclosure statement has been considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 and 17-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Wong (U.S. Pub. 2004/0127267).

Regarding claims 1 and 17, Wong teaches in a mobile terminal provided with a rotating key having a plurality of dome switches on one side which can detect a contact signal when pressed and a plurality of contact surfaces on the other side which can detect the position of the rotating key in each direction of rotation (see fig.1-8 and 17-19, page 2-3 sections [0033-0039] and page 4, section [0046]), a method for using the rotating key comprising the steps of: detecting if the rotating key is turned or a dome switch is pressed in a menu or function selection mode (see fig.1-8, page 3-5, sections [0039, 0046 and 0055]); when the rotating key is turned, selecting a menu according to the direction of rotation (see fig. 1-8, 11 and 17-19, page 3 and 5,

section [0039 and 0055 and 0062]). In this case, the when the rotating interface (key) 210 is move the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen. And when a dome switch is pressed, selecting a menu or function according to the pressed dome switch (see fig. 1-8, 11 and 17-19, page 3 and 5, sections [0039 and 0055]). In this case, selecting menu or the data entry mode for scrolling information on the screen.

Regarding claims 2 and 18, Wong teaches the step of turning the rotating key to select a menu or function (see fig. 1-8, 11 and 17-19, page 3 and 5, sections [0039 and 0055]). In this case, selecting menu or the data entry mode for scrolling information on the screen comprises: Wong inherently teaches when the rotating key is turned clockwise, moving a cursor to menus or functions in a predetermined direction; and when the rotating key is turned counterclockwise, moving the cursor to menus or functions in the opposite direction (see fig.1-8, page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, the when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen.

Regarding claims 3 and 19, Wong teaches inherently teaches in an up/down scroll display mode, the cursor moves to upper menus or functions when the rotating key is turned clockwise and to lower menus or functions when the rotating key is turned counterclockwise (see fig.1-8,

page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, the when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen.

Regarding claims 4 and 20, Wong teaches inherently teaches the cursor moves to lower menus or functions when the rotating key is turned clockwise and to upper menus or functions when the rotating key is turned counterclockwise (see fig.1-8, page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, the when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen.

Regarding claims 5 and 21, Wong inherently teaches in a left/right scroll display mode, the cursor moves to left menus or functions when the rotating key is turned clockwise and to right menus or functions when the rotating key is turned counterclockwise (see fig.1-8, page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, the when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen.

Regarding claims 6 and 22, Wong inherently teaches the cursor moves to right menus or functions when the rotating key is turned clockwise and to left menus or functions when the rotating key is turned counterclockwise (see fig.1-8, page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, the when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen.

Regarding claims 7 and 23, Wong teaches the step of pressing a dome switch to select a menu or function comprises: when a left or right dome switch is pressed, moving a cursor to left or right menus or functions; and when an upper or lower dome switch is pressed, moving the cursor to upper or lower menus or functions (see fig.1-8, page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, the when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen and when selected that is inherently pressed the switch when the switch is coupling.

Regarding claims 8 and 24, Wong inherently teaches the dome switches are used as short-cut keys (see fig.1-8, page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, the

multi-function key is pressed and selected using the dome switch to contact with other function that is a used as short-cut keys or the re-dialing switch is also the short-cut keys for re-dialing.

Regarding claim 9, Wong inherently teaches the function comprises at least one of direction of motion picture (see fig. 4, page 3, section [0039]). In this case, the function is steer the motion picture of the game.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10-14 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (U.S. Pub. 2004/0127267) in view of Arai (U.S. Pub. No. 2004/0218738).

Regarding claims 10 and 25, Wong teaches in a mobile terminal (100) provided with a rotating key having a plurality of dome switches the to detect a contact signal when pressed and a plurality of contact surfaces to detect the position of the rotating key in each direction of rotation (see fig.1-8 and 17-19, page 2-3 sections [0033-0039] and page 4, section [0046]), a method for using the rotating key comprising the steps of: detecting if the rotating key is turned or a dome switch is pressed in a menu or function selection mode (see fig.1-8, page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, the when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple

position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen and when selected that is inherently pressed the switch when the switch is coupling. But Tomura does not mention when a zoom function is selected in a camera mode, zooming in or out according to the direction and speed of rotation of the rotating key; and when a brightness control function is selected in the camera mode, controlling the brightness of a picture according to the direction and speed of rotation of the rotating key.

However, Arai teaches in a mobile terminal (300) provided with a camera (303) and a rotating key (531) (see fig. 2 and 18) when a zoom function is selected in a camera mode (see fig. 18, camera mode with zoom function on the rotation switch 531, page 11, sections [0198-0211]), zooming in or out according to the direction and speed of rotation of the rotating key (see fig. 18, rotating switch 531 up/down for zooming in or out); and when a brightness control function is selected in the camera mode (see page 3, sections [0054-0056 and page 11, sections [0208-0210]), controlling the brightness of a picture according to the direction and speed of rotation of the rotating key (see fig. 18 with function of switch 531 for controlling, and page 5, sections [0099-0103] for controlling while balance, gamma correction).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Wong with Arai, in order to provide user with two functions are attained using common switches, a compact low cost image communication device (see suggested by Arai on page 11, section [0210]).



Regarding claims 11 and 26, Arai teaches the step of zooming in or out in the camera mode (see fig. 18, page 11, sections [0202 and 0208]) and Arai also inherently teaches the comprises: when the rotating key is turned clockwise (see fig. 18, Switch 531 turn downward), zooming in or out according to the turning speed; and when the rotating key is turned counterclockwise (see fig. 18, Switch 531 turn upward), zooming out or in according to the turning speed (see fig. 18, page 11, section [0202 and 0208-0211]). In this case the switch 531 is serving as a zoom switch so the zoom in or out will be the turn of the speech of the switch 531.

Regarding claims 12 and 27, Arai teaches the step of controlling the brightness comprises: when the rotating key is turned clockwise, increasing or decreasing the brightness of the picture according to the turning speed; and when the rotating key is turned counterclockwise, decreasing or increasing the brightness of the picture according to the turning speed.

Regarding claims 13 and 28, Wong teaches in a mobile terminal (100) provided with a rotating key having a plurality of dome switches (see fig.1-8 and 17-19, page 2-3 sections [0033-0039] and page 4, section [0046]). And Arai teaches a multi-function switch 531 are used to perform the zoom function (see fig. 17-18, the multi-function switch 531, page 11, section [0202 and 0208-0211]). In this case the switch 531 with pressed on the dome switch and serving as a zoom switch so that the combination of Wong and Arai teaches the limitation of the claim.

Regarding claim 14, Wong teaches in a mobile terminal (100) provided with a rotating key having a plurality of dome switches (see fig.1-8 and 17-19, page 2-3 sections [0033-0039]

and page 4, section [0046]), on one side which can detect a contact signal when pressed and a plurality of contact surfaces on the other side which can detect the position of the rotating key in each direction of rotation (see fig. 1-8 and 17-19, page 3-5, sections [0038-0039, 0046-48 and 0055]). In this case, when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen and when selected that is inherently pressed the switch when the switch is coupling. But Wong does not mention in a mobile terminal provided with a camera and the step of the rotating key to reproduce a moving picture; when the rotating key is turned clockwise, reproducing the moving picture according to the turning speed in a predetermined direction corresponding to the clockwise turning; and when the rotating key is turned counterclockwise, reproducing the moving picture according to the turning speed in a predetermined direction corresponding to the counterclockwise turning.

However, Arai teaches in a mobile terminal (300) provided with a camera (303) and a rotating key (531) (see fig. 2 and 18) when a zoom function is selected in a camera mode (see fig. 18, camera mode with zoom function on the rotation switch 531, page 11, sections [0198-0211]), when the rotating key is turned clockwise, reproducing the moving picture according to the turning speed in a predetermined direction corresponding to the clockwise turning; and when the rotating key is turned counterclockwise, reproducing the moving picture according to the turning speed in a predetermined direction corresponding to the counterclockwise turning (see fig. 18, the rotation multi-function switch 531, page 11, sections [0198-0211], and page 9-10, sections [000170-0173]). In this case, the rotation multi-function switch 531 can be zooming in

or out according to the direction and speed of rotation of the rotating key and also the execute a desired function while observing displayed menu items move or layout the items display like picture or text...with rotation multi-function switch 531.

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Wong with Arai, in order to provide user with two functions are attained using common switches, and adopts an efficient switch layout, a compact low cost image communication device (see suggested by Arai on page 10-11, section [0174 and 0210]).

6. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (U.S. Pub. 2004/0127267) in view of Ritter (U.S. Patent No. 6,941,154).

Regarding claim 15, Tomura teaches in a mobile terminal (100) provided with a rotating key having a plurality of dome switches on one side which can detect a contact signal when pressed and a plurality of contact surfaces on the other side which can detect the position of the rotating key in each direction of (see fig.1-8 and 17-19, page 3-5, sections [0033-0039, 0046-48 and 0055]). In this case, the when the rotating interface (key) 210 is rotating 360 degree in a predetermined direction and the teeth 1102 are selecting and couple position the switch lever and affect is that the information on the display 204 like menu or game in one coinciding direction and also data entry mode for scrolling information on the screen and when selected that is inherently pressed the switch when the switch is coupling. But Wong does not mention in a mobile terminal provided with a TV receiver detecting the direction of rotation of the rotating

key to select a channel in a television mode; and displaying video signals broadcast on a channel selected according to the direction of rotation of the rotating key.

However, Ritter teaches in a mobile terminal provided with a TV receiver (fig. 1, col. 3, lines 9-23) detecting key (92) to select a channel in a television mode (fig. 1, col. 3, lines 9-23); and displaying video signals broadcast on a channel selected (see fig. 1, col. 5, lines 66-col. 6, lines 32). In this case, Wong teaches the rotating key for select the menu items and Ritter teaches the selection key 92 for selected the function mode with the cursor go up/down, so that the combination of the rotating key of Wong replace with mode selection switch 92 of Ritter for using in channel selection or other.

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Wong with Ritter, in order to provide user with broadcast channel for playing in mobile terminal (see suggested by Ritter on col. 6, lines 18-41).

Regarding claim 16, Ritter teaches the dome switches (92) are used to select a channel (see col. 6, lines 2-27). In this case, the F-key 92 can selecting the channel and also order the a production.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection with the new reference of Wong (U.S. Pub. 2004/0127267). Wong teaches the rotatable user interface key 210, can rotate freely 360 degree

with center axis 216 (see fig. 1-9 and 17-19, page 3 sections [0038-0039]). Therefore the combination of the Wong reference, Arai or Ritter, teaching the invention of the claims.

***Conclusion***

**8. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(571) 273-8300, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to the Customer Service Window (now located at the **Randolph Building, 401 Dulany Street, Alexandria, VA 22314**).*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

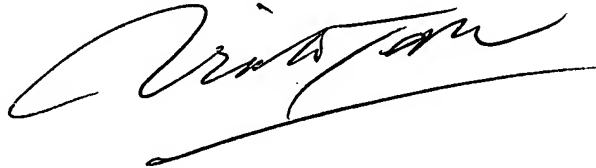
Application/Control Number:  
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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh  
Division 2618  
January 21, 2008

**PATENT EXAMINER**  
**TRINH, TAN**

A handwritten signature in black ink, appearing to read 'Tan H. Trinh', with a long horizontal stroke extending to the right.